

# UNCLASSIFIED

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oag, d/a ltr, 29 apr 1980

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IN REPLY REFER TO

AGAM-P (M) (15 Oct 68) FOR OT RD 683123

17 October 1968

SUBJECT: Extract from Operational Report - Lessons Learned, Headquarters,  
185th Maintenance Battalion (DS), Period Ending 31 July 1968

SEE DISTRIBUTION

1. Subject extract is forwarded for review and evaluation in accordance with paragraph 5b, AR 525-15. Evaluations and corrective actions should be reported to ACSFOR OT RD, Operational Reports Branch, within 90 days of receipt of covering letter.

2. Information contained in this report is provided to insure that the Army realizes current benefits from lessons learned during recent operations.

3. To insure that the information provided through the Lessons Learned Program is readily available on a continuous basis, a cumulative Lessons Learned Index containing alphabetical listings of items appearing in the reports is compiled and distributed periodically. Recipients of the attached report are encouraged to recommend items from it for inclusion in the Index by completing and returning the self-addressed form provided at the end of this report.

BY ORDER OF THE SECRETARY OF THE ARMY:

*C. A. Stanfield*  
C. A. STANFIELD  
Colonel, AGC  
Acting The Adjutant General

1 Incl  
as

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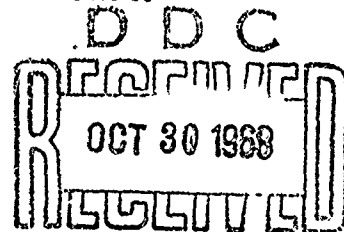
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AVCA SGN SG MT O

I August 1968

SUBJECT: Operational Report of 185th Maintenance Battalion (DS) for Period  
Ending 31 July 1968, RCS CSFOR-65 (RI)

### SECTION II

#### Commander's Observations, Evaluations, and Recommendations

##### I PERSONNEL

###### Contact team capability

OBSERVATION. Prior to this reporting period, normal practice was to provide automotive and armament capability with contact teams, with limited signal, engineer, and small arms repair. Most of these items were evacuated from the forward area. To achieve timely repair and return of equipment, additional capability was attached to the contact teams. At the present time only those items which require heavy maintenance or extensive repairs are evacuated from the forward area.

EVALUATION. This additional maintenance capability has been very effective and contact maintenance support during Operation Toan Thang has been much more satisfactory.

RECOMMENDATION. Contact teams should have across-the-board maintenance capability and evacuation from the forward area should be minimized.

##### 2. OPERATIONS

###### a. The rotor mounting plate on 3KW and 5KW generators

OBSERVATION. Many 3KW and 5KW generators go to support maintenance for locked up engines. The rotor mounting plate that bolts to the engine fly-wheel has a tendency to bow. The solution to this problem is to unbolt the plate and reverse it, thus freeing the rotor and allowing the engine and generator to rotate.

EVALUATION. This solution has proven successful.

RECOMMENDATION. It is recommended that this solution be incorporated in the technical manual.

###### b. Fire control instrumentation

OBSERVATION. An excess of fire control instruments are in for maintenance due to moisture which causes rust and fungus.

EVALUATION. Due to climatic conditions in Vietnam extreme care must be taken in repairing instruments with defective seals. If the sealing compound is warmed it can be molded into very small cracks and gives a better seal.

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Ending 31 July 1968, RCS CSFOR-65 (RI)

RECOMMENDATION. Application of warm sealing compound will cut down on lost time caused by recurring leaks.

### C. Repair of MII3AI fuel cells

OBSERVATION. Support maintenance units have been confronted with a recurring problem of leaking MII3AI fuel cells.

EVALUATION. The cracked portion of the tank must be thoroughly cleaned. The seam coating on the inside is first melted out, using a torch. Next the crack is thoroughly cleaned with acetone, carbon-tet, or a strong detergent. Both the inside and outside surfaces of the crack are cleaned. The cleaning agent is blown with compressed air through the crack from the inside of the tank to the outside. On cracks over 5 inches long,  $\frac{1}{8}$  inch holes are drilled along the crack about  $1\frac{1}{2}$  inches apart. This allows the cleaning agent to penetrate and clean all portions of the crack. Working from the outside of the tank, the crack is graved about  $\frac{1}{8}$  inch deep and  $\frac{1}{8}$  inch wide with a cape chisel. A grinder is not used, as it will glaze the metal which results in poor weld penetration. All welding is done with the MIG process using 8052 wire at 35 centimeters of argon. The crack is welded from the inside of the tank first using a figure eight or half moon technique (same as vertical welding). This technique prevents spreading of the crack. The weld is continued 3 inches beyond each end of the crack. The outside grooved portion of the crack is welded with a fillet weld. To reduce the flexing of the tank wall an inch solid bar, 8052 aluminum stock, is welded inside between the two large sides of the fuel cell. The bar is positioned approximately 6 inches from the center of the tank to allow clearance for the fuel quantity sensing float.

RECOMMENDATION. The above process should be used by support units in the repair of MII3AI fuel cells. Fuel cells repaired using these procedures have been closely observed for a period of 150 days with no failure recurring.

### d. $\frac{1}{4}$ ton engines from the cannibalization point

OBSERVATION. Much time has been put in replacing unserviceable  $\frac{1}{4}$  ton engines with engines from the CC&S Company only to find that the replacement engine is unserviceable. This problem was solved by building a test stand for the  $\frac{1}{4}$  ton engine and testing it before putting it in the vehicle.

EVALUATION. Much lost time can be reclaimed by the fabrication of a test stand.

RECOMMENDATION. Recommend that an engine test stand be fabricated for testing  $\frac{1}{4}$  ton engine when the engine is received from the CC&S Company.

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SUBJECT: Operational Report of I85th Maintenance Battalion (DS) for Period  
Ending 31 July 1968, RCS CSFOR-65 (RI)

e. Cover, Transmission, 3/4 ton truck FSN 2520-672-8303 and lever, shift FN# 7057658

OBSERVATION. There have been several instances recently where the transmission shift lever has separated from the socket in top of the transmission top cover on the 3/4 ton truck. This condition makes the vehicles inoperable because instead of shifting gears the shift lever rotates. Normal procedure is to overhaul the top cover, but parts are hard to get. Now the levers are being positioned in their sockets and spot welded in place.

EVALUATION. So far this operation has proven highly successful. Many hours were saved.

RECOMMENDATION. Evaluation is not yet complete. An EIR will be submitted to ATAC when more experience has been gained.

f. Rifle M16AI

OBSERVATION. On occasion the spring, detent takedown pin and detent takedown pin in Rifle M16AI will become frozen to the point that lubricants will not free them.

EVALUATION. A small hole can be drilled with a #35 drill on an angle of approximately 45 degrees to the lower receiver and 1 inch back from the opening for the spring detent. A punch may be used to drive the spring and detent out.

RECOMMENDATION. Above procedure should be used in such cases. It will return the weapon to use in one hour.

3. TRAINING. NONE

4. INTELLIGENCE. NONE

5. LOGISTICS

g. Constant Velocity Boots, (CV Boots) on 2 1/2 ton "M" series vehicles

OBSERVATION. A shortage of CV Boots on 2 1/2 ton "M" series Vehicles, as replacement items, exists in supply channels. A means of recovering a large number of CV Boots was devised.

EVALUATION. Most failures occur along the zipper line. With the use of rubberized glue or canvas repair glue the small holes can be repaired. In some instances it may be necessary to use an industrial type sewing.

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SUBJECT: Operational Report of 185th Maintenance Battalion (DB) for Period  
Ending 31 July 1968, RCS CSFOR-65 (RI)

1 August 1968

machine and cross stitch large rips and then cover the repaired surface with glue.

RECOMMENDATION. Units finding defective CV Boots should closely examine these boots for possible repair before disposing of them through salvage channels.

b. Clutch fingers on a LeTourneau-Westinghouse grader, FSN 3805-931-7881

OBSERVATION. The clutch fingers for a LeTourneau-Westinghouse grader, FSN 3805-931-7881 are critically short in supply channels. A suitable substitute was found and supplies for this substitute are available through normal channels.

EVALUATION. It was found that the clutch fingers, FSN 2520-697-4152, of the 5 ton "M" series wheel vehicles will inter-change and give satisfactory service in a LeTourneau-Westinghouse grader.

RECOMMENDATION. Units supporting LeTourneau-Westinghouse graders should be made knowledgeable of the fact that the 5 ton "M" series clutch fingers will inter-change with the fingers on this grader.

6. ORGANIZATION: NONE

7. OTHER

Problem with the new type sand bags (plastic)

OBSERVATION. New type sand bag construction sometimes leaves a lot to be desired. The sand bags being made of plastic tend to slip when wet and this causes many bunkers and protective walls to be rebuilt. To prevent this, sprinkle cement lightly between the outer layers of the sand bags and then add water before placing the next layer.

EVALUATION. For permanent type bunkers and protective walls, cement seems to be the best way to prevent the sand bags from falling.

RECOMMENDATION. Recommend that cement be used to hold sand bags in place for permanent and semi-permanent structures.

-3-Encl. Withdrawn,  
---as--- HQ, DA

*Billie E. Seals*  
BILLIE E SEARLS  
LTC, OrdC  
Commanding

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AVCA SGN SG 0 (1 August 1968) 1st Ind  
SUBJECT: Operational Report of 185th Maintenance Battalion (DS)  
for Period Ending 31 July 1968, RCS C3FOR-65 (RI)(U)

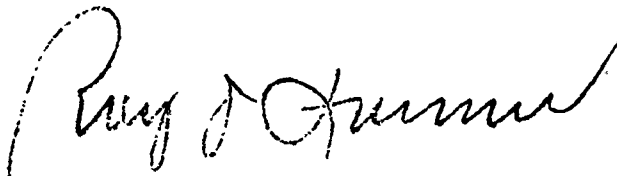
DA, Headquarters, 29th General Support Group, APO 96491 13 August 1968

TO: Commanding General, US Army Support Command, Saigon, APO 96491

Ass't Chief of Staff for Force Development Department of the  
Army, Washington, D.C. 20310

1. This headquarters has reviewed Operations Report - Lessons Learned for the 185th Maintenance Battalion (DS) and considers it adequate.
2. Page 3, paragraph 2 line 5 is in error. Items with less than three demands in a year were dropped from stockage.
3. Concur with recommendations.

FOR THE COMMANDER:



ROY J. PALMER  
MAJ, AM.  
Adjutant



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AVCA SGN GO S (1 Aug 68). 2A:Ind.

SUBJECT: Operational Report for Quarterly Period Ending 31 July 1968  
(RCS CSFOR-65) (185th Maintenance Battalion)(DS)

HQ, US Army Support Command, Saigon, APO US Forces 96491 20 Aug 68

TO: Commanding General, 1st Logistical Command, ATTN: AVCA GO O, APO  
96384

1. The Operational Report - Lessons Learned for the Quarterly Period Ending 31 July 1968, of the 185th Maintenance Battalion (DS) is forwarded in accordance with the provisions of para 9, AR 1-19.

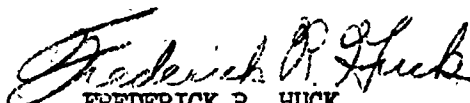
2. Reference Section II, para 7: a. In addition to cement being used to aid stability of bunkers, this headquarters has found that substantial cohesiveness can be obtained by spraying sand bagged structures with penetol, an asphalt derivative.

b. This is the second comment that indicates sandbags, polypropylene, FSN 8105-926-2035 are somewhat less than satisfactory. It is recommended that an army wide survey be conducted to determine if this item should be removed from the army inventory.

3. Lessons Learned, observations, and recommendations are concurred in by this command, with the exception above. A copy of this indorsement has been provided to the originating headquarters.

FOR THE COMMANDER:

TEL: LB 2604

  
FREDERICK R. HUCK  
Colonel, GS  
Chief of Staff

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AVCA GO-O (1 Aug 68) 3rd Ind  
SUBJECT: Operational Report for Quarterly Period Ending 31 July 1968  
(RCS CSFOR-65)(185th Maintenance Battalion)(DS)

DA, Headquarters, 1st Logistical Command, APO 96384 15 SEP 1968

TO: Commanding General, United States Army Vietnam, ATTN: AVHGC-DST,  
APO 96375

1. The Operational Report - Lessons Learned submitted by Headquarters, 185th Maintenance Battalion for the quarterly period ending 31 July 1968 is forwarded.

2. Pertinent comments follow:

a. Reference Section II, paragraph 2a. Concur. The 185th Maintenance Battalion should submit recommended changes in accordance with instructions contained in appropriate technical manuals. No action required by higher headquarters until recommended changes are received.

b. Reference Section II, paragraph 2c. Concur. Directorate of Maintenance of this headquarters is disseminating the procedure to repair M113A1 fuel cells to all support commands. No action required by higher headquarters.

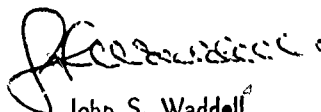
c. Reference Section II, paragraph 5b. Nonconcur with recommendation as of now. USASUPCOM, SGN has been requested to thoroughly investigate this procedure and run time tests.

d. Reference Section II, paragraph 7. Concur. The procedure prescribed will decrease sliding between polypropylene sandbags. However, a mixture of sand and cement will increase the friction between the surfaces of the sandbags and will be more economical. Also, application of a thin coat of peneprine to the exposed sandbags will provide a partial waterproof covering which will also hinder sliding. No action is required by higher headquarters.

3. Concur with the basic report as modified by indorsements. The report is considered adequate.

FOR THE COMMANDER:

TEL: LBN 2684

  
John S. Waddell  
1LT, AGC  
Assistant Adjutant General

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AVHGC-DST (1 Aug 68) 4th Ind MAJ Klingman/ds/IBN 4433  
SUBJECT: Operational Report of 185th Maintenance Battalion (DS) for  
Period Ending 31 July 1968, RCS CSFOR-65 (RI)

HEADQUARTERS, UNITED STATES ARMY VIETNAM, APO San Francisco 96375 22 SEP 1968

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-DT,  
APO 96558

This headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 31 July 1968 from Headquarters, 185th Maintenance Battalion (DS), and concurs with the report as modified by the preceding indorsements.

FOR THE COMMANDER:



F. S. TAYLOR, JR.  
Major, AGC  
Asst Adjutant General

Cy furn:  
HQ 1st Log Cmd  
HQ 185th Maint Bn

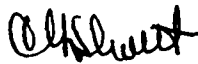
GPOP-DT (1 Aug 68) 5th Ind  
SUBJECT: Operational Report of HQ, 185th Maint Bn (DS) for Period  
Ending 31 July 1968, RCS CSFOR-65 (R1)

HQ, US Army, Pacific, APO San Francisco 96558 3 OCT 1968

TO: Assistant Chief of Staff for Force Development, Department of the  
Army, Washington, D. C. 20310

This headquarters has evaluated subject report and forwarding indorse-  
ments and concurs in the report as indorsed.

FOR THE COMMANDER IN CHIEF:

  
C. L. SHORTT  
CPT, AGC  
Asst AG

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13. ABSTRACT			

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The following items are recommended for inclusion in the Lessons Learned Index:

ITEM 1

\* SUBJECT TITLE \_\_\_\_\_  
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ITEM 5

SUBJECT TITLE \_\_\_\_\_  
FOR OT RD # \_\_\_\_\_  
PAGE # \_\_\_\_\_

\* Subject Title: A short (one sentence or phrase) description of the item of interest.

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